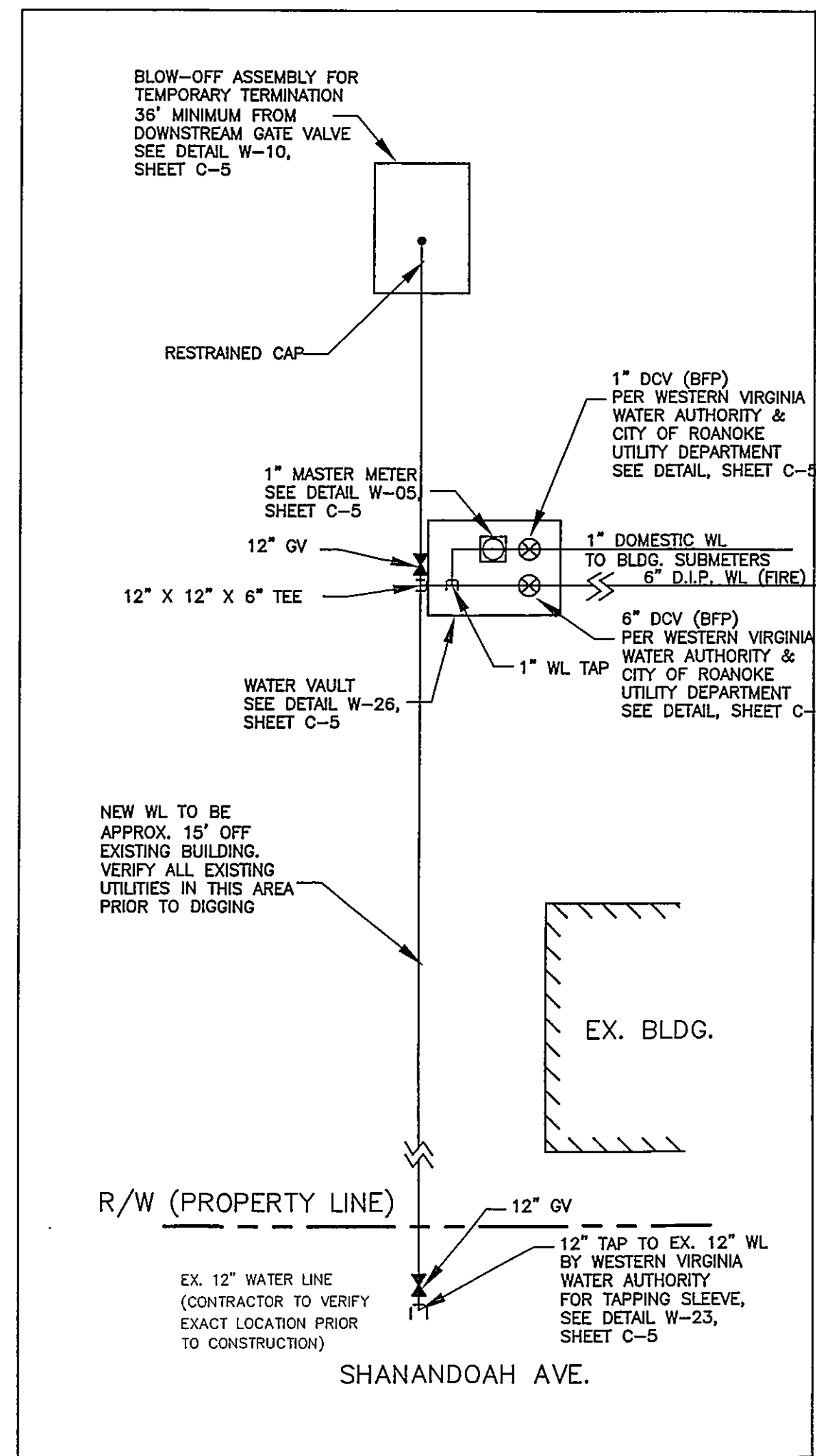


VICINITY MAP
NOT TO SCALE



WATER CONNECTION PLAN: A

NOT TO SCALE

ABBREV.	DESCRIPTION
AEP	Appalachian Electric Power
APCO	Appalachian Power Company
DI	Drop Inlet
OU	Overhead Utilities
W	Waterline

LEGEND	
Existing Property Monument	
Sanitary Sewer Manhole	
Utility Pole	
Sign	
Directional Arrow	
Property Corner	

Water Distances

Tapping G _{V1} → 45°	2.7'
45° → 45°	10.1'
45° → 22.5°	10.0'
22.5° → T ₁	23.6'
T ₁ → 1" Service	24.5'
1" Service → G _{V2}	3.5'
G _{V2} → Temp. G/O	61.5'

Pipe is 12" OIP
Valves are Mueller, right to close.
FH is American Darling Valve.
Service is 1" HDPE

NOTE: CONTRACTOR IS RESPONSIBLE FOR INSTALLING NEW 12" WL AND ALL ASSOCIATED APPURTENANCES, INCLUDING 12"x12" TAPPING SLEEVE & VALVE, PER WVWA STANDARDS. INCLUDE DETAIL OF TAPPING SLEEVE & VALVE. WVWA WILL MAKE THE PHYSICAL WET TAP, BUT GC IS RESPONSIBLE FOR EXCAVATING, SHORING AND BACKFILL/RESTORATION.

NOTE: ALL CONSTRUCTION, CONSTRUCTION MATERIALS, SPECIFICATIONS & DETAILS SHALL BE IN ACCORDANCE WITH CITY OF ROANOKE, VIRGINIA DCR & VDOT GUIDELINE AND CONSTRUCTION PRACTICES.

EACH REQUIRED BPA IS REQUIRED TO BE TESTED BY A CITY OF ROANOKE OR ROANOKE OR WESTERN VIRGINIA WATER AUTHORITY APPROVED CERTIFIED TESTER PRIOR TO PLACING THE WATER SYSTEM IN SERVICE.

REDUCED PRESSURE PRINCIPAL BACKFLOW PREVENTION ASSEMBLY INSTALLED ABOVE GROUND WITH INSULATED ENCLOSURE PER WESTERN VIRGINIA WATER AUTHORITY REQUIREMENTS. ENCLOSURE TO INCLUDE DRAIN PORT(S) FOR DISCHARGE WATER PER REQUIREMENTS.

UTILITY NOTES:

- THE UTILITIES AND THE LOCATIONS THEREOF, SHOWN ON THE DRAWING, REPRESENT THE DESIGNER'S UNDERSTANDING OF EXISTING UTILITIES IN THE CONSTRUCTION AREA. THE CONTRACTOR SHALL VERIFY THE LOCATION, DEPTH AND EXISTENCE OF ALL UTILITIES (ELECTRICAL, MECHANICAL, WATER, TELEPHONE, GAS, ETC.) WITHIN THE CONSTRUCTION AREA WITH THE OWNER AND/OR THE APPROPRIATE UTILITY COMPANY PRIOR TO BEGINNING ANY EXCAVATION. THE OMISSION OF OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NON-EXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. CONTACT U-LOCO (1-800-632-4949) PRIOR TO DIGGING.
- CONTRACTOR TO VERIFY LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. CARE SHALL BE TAKEN TO PREVENT DAMAGE TO EXISTING UTILITIES DURING CONSTRUCTION. ANY DAMAGE TO THESE UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR TO COORDINATE WITH OTHER UTILITY COMPANIES TO PREVENT CONFLICTS (I.E., PIPE CROSSINGS) WHEN LAYING PIPE. SOME UTILITIES MAY NEED TO BE ADJUSTED IN FIELD. CONTACT ENGINEER IMMEDIATELY IF SUCH A CASE ARISES.
- CONTRACTOR TO COORDINATE ANY UTILITY REMOVALS AND RELOCATIONS WITH CITY OF ROANOKE PUBLIC WORKS DEPARTMENT.
- USE WYES, BENDS & TEES AS NECESSARY FOR UTILITY CONSTRUCTION.
- MINIMUM COVER OVER ALL WATER LINES IS TO BE 3'.
- MINIMUM SEPARATION DISTANCES FOR SANITARY SEWER LINES FROM:
 - WATER LINES - 18" VERTICAL OR 10' HORIZONTAL
 - STORM SEWERS - 12" VERTICAL
- D.I.P. WITH MECHANICAL JOINT ENDS MAY BE SUBSTITUTED WHERE SEPARATION DISTANCES BETWEEN THE SANITARY SEWER LINE AND WATER LINE OR STORM SEWER CANNOT BE MAINTAINED. PIPE MUST BE LAID SUCH THAT FULL SECTIONS OF PIPE ARE CENTERED ON THE CROSSING POINT & EXTEND A DISTANCE OF 10' ON EACH SIDE OF THE POINT OF CROSSING.
- SEWER SERVICE LATERALS ARE SHOWN AT ANTICIPATED LOCATIONS. CONTRACTOR SHALL COORDINATE FINAL LOCATIONS WITH DEVELOPER.
- ALL CONSTRUCTION AND CONSTRUCTION MATERIALS SHALL CONFORM TO WESTERN VIRGINIA WATER AUTHORITY DETAILS AND SPECIFICATIONS.
- CONTRACTOR TO PROVIDE ALL EROSION CONTROL MEASURES AS REQUIRED BY STATE AND LOCAL AUTHORITIES.
- ALL TAP FEES FOR WATER, SANITARY SEWER, GAS, ELECTRICAL, ETC. TO BE PAID BY UTILITY CONTRACTOR.
- LIGHTING FIXTURES TO BE, P/N PRK400MHT/LAMP BY COMPLETE LIGHTING SOURCE OR EQUAL WITH INSTALLED GLARE SHIELD, P/N AR828-VISOR. THIS IS A FLAT LENS FIXTURE.

CONTRACTOR TO CONTACT LOCAL NATURAL GAS COMPANY TO SEE IF SERVICE IS AVAILABLE TO THE SITE.

CONTRACTOR TO REFER TO MECHANICAL PLANS FOR EXACT LOCATION OF ALL UTILITY CONNECTIONS TO BUILDING.

CONTRACTOR TO COORDINATE WITH THE CITY OF ROANOKE OR WESTERN VIRGINIA WATER AUTHORITY ON THE CONNECTIONS OF PROPOSED WATER & SANITARY SEWER LINES. CONTRACTOR TO LOCATE & VERIFY EXISTING WATER MAIN & SANITARY SEWER LATERALS AND NOTIFY DESIGN ENGINEER OF ANY CONFLICTS IN PROPOSED DESIGN PRIOR TO CONSTRUCTION.

THERE SHALL BE NO TAPS, PIPING BRANCHES, UNAPPROVED BYPASS PIPING, HYDRANTS, FIRE DEPARTMENT CONNECTION POINT, OR OTHER WATER USING APPURTENANCES CONNECTED TO THE SUPPLY LINE BETWEEN ANY WATER METER AND ITS REQUIRED BACKFLOW PREVENTER.

NOTE: ELECTRICAL, TELEPHONE & GAS SERVICE LINES ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. EXACT LOCATIONS TO BE DETERMINED BY LOCAL UTILITIES IN FIELD. CONTRACTOR TO COORDINATE ALL SERVICE CONNECTIONS AND LOCATIONS. AVOID CONFLICTS WITH OTHER UTILITIES.

Sewer Information

Distance:
Existing MH → New MH 22.0'
Pipe: 6" SDR-35 PVC
MH: Pre-cast concrete
Frame and Cover: East Jordan

As-Builts 9/28/07 K. Winslow



SCALE: 1" = 20'

ISSUE DATE: JULY 13, 2006

REVISIONS		
NO.	DATE	DESCRIPTION
1	08/25/06	PER CITY OF ROANOKE COMMENTS
2	09/08/06	PER CITY OF ROANOKE COMMENTS

FAMILY DOLLAR STORE
631 PETERS CREEK ROAD
ROANOKE COUNTY
ROANOKE, VA.

UTILITY PLAN & LIGHTING PLAN

C-3

Titan Engineering Group, Inc.
CIVIL ENGINEERS - LAND PLANNING
201 WEST SECOND AVE, GASTONIA, N.C. 28032
TEL: 704-536-5054 FAX: 704-536-5055

FRANKLIN S. CRAIG
No. 030017
PROFESSIONAL ENGINEER
10/20/06